

Figure 1

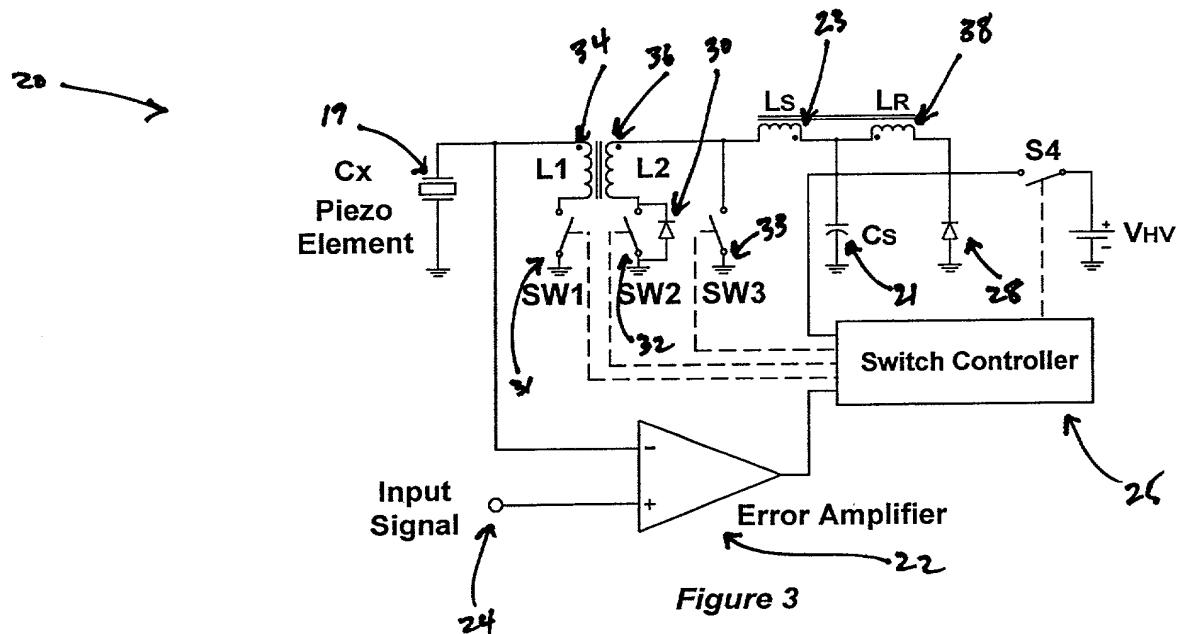
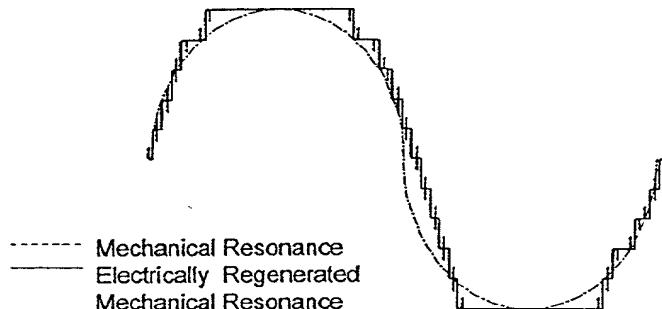


Figure 3

w i l l c o x o n

## Regenerative Piezo Drive Amplifier Resonant Wave Shapes



Mechanical Resonance << Electrical Resonance (50 KHz)

SPIE 4327-91

6

March 5, 2001

FIG. 2

000000000000000000000000

V of  
piezoelectric  
element

switch 3

V of  
storage  
capacitor

switch 1 & 2

Timing diagram for the transfer  
of  $\Delta V$  from  $C_s$  to  $C_x$

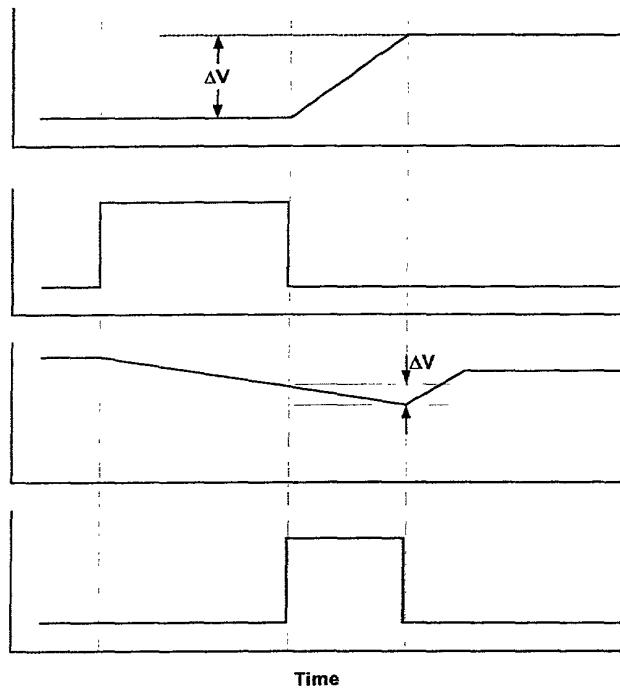
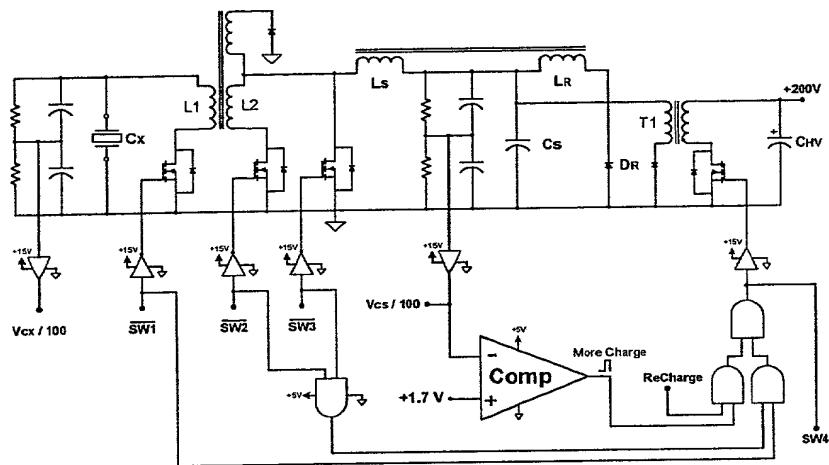


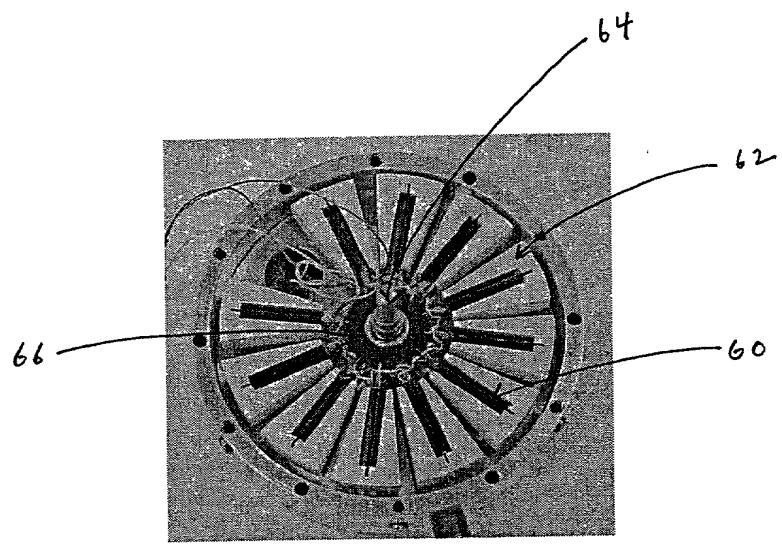
Figure 4

**Regenerative, Switching Piezo Driver Concept**  
**(High Voltage & High Power Section)**



**Figure 5**

0 918 655 9159 - 0062 20



**Figure 6**